

REMARKS

Claims 1 and 6 are pending. The amendments to Claim 1 are supported in the originally filed specification as follows: p.6, lines 16-17 and Claim 7. No new matter is added.

Claims 8, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Zon (3652109). (Office Action, page 2)

Claims 8, 10 and 12 are canceled making this rejection moot.

Claims 1, 6-8, and 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (JP2000208471) in view of Laverdiere (US PG Pub 20050173003) and Baker (3410531) further in view of Van Zon (3652109). (Office Action, page 3)

Ota et al. fails to disclose a hollow fiber shape circulation tube having an internal diameter of 0.05 to 5 mm, as now claimed. The rejection states on p.4, "Laverdiere (page 7, 2nd column, lines 30-35) teaches a fluid flow controller using hollow fiber tube to regulate pressure drops and thus control flow rate." However Laverdiele teaches that the internal diameter of the frictional flow element is 0.0625"(1.6 mm), 0.156" (4.0 mm), 0.250" (6.35 mm) or 0.375" (9.53 mm) (Paragraphs [0093]-[0096]). Therefore, Laverdiele fails to disclose a hollow fiber shape circulation tube having an internal diameter of 0.05 to 5 mm. According to Comparative Example 1 of the present invention, if the diameter of the hollow fiber shape circulation tube is approximately 5 mm, the tube is required to have an unduly long length, which cannot be used for practical purposes.

Furthermore, Ota fails to disclose keeping the supply liquid pressure constant. The rejection states on p.4, "Baker (Figs. 1-3) teaches a method of mixing one liquid 40 to another liquid 42 while maintaining a desired mixing ratio ... without the use of a feedback mechanism." However, Baker fails to disclose a mixing ratio X/Y between a flow quantity X of the supply solution and a flow rate Y of the primary fluid being 1/1000000 to 1/1000. In the claimed invention, a tiny amount of electrolyte is added to a large amount of ultrapure water, and the pressure of the electrolyte is maintained at a constant level even if the flow rate of ultrapure water is varied, because a proper amount of electrolyte is automatically added to the primary fluid to keep the concentration of electrolyte constant. In contrast, in the method of Baker, the two reaction components are mixed at a ratio of 1:1 (Baker, colum5, line 7), which is different

from the mixing ratio X/Y of claim 1. Moreover, in the method of Baker, in order to carry out a chemical reaction stoichiometrically, the mixing ratio is maintained at a constant level by supplying a constant amount of the two components. In contrast, in the method of claim 1, the mixing ratio is maintained by automatically adding a proper amount of electrolyte according to the variation of the flow rate of the primary fluid.

Furthermore, Ota fails to disclose the material of the fluid conduits. The Office Action states on p. 3 that, "Van Zon discloses the tubing (col.6, line 36) assembly made from polyethylene resin." However, by the above amendment, the material of the supply liquid circulation tube is a fluorine resin or poly(4-methylpentene-1) based resin. Thus, Van Zon does not teach the material of the supply liquid circulation tube as now claimed.

Therefore, nowhere is the method of claims 1 and 6 disclosed or taught in the combination of cited references. It is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 1, 6-8, and 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (JP2000208471) in view of Kumano et al. (US PG Pub 20060144777) and Baker (3410531) further in view of Van Zon (3652109). (Office Action, page 5)

Ota et al. fails to disclose a hollow fiber shape circulation tube having an internal diameter is 0.05 to 5 mm, as now claimed. The rejection states on p.5, "Kumano et al. (page 5, para 47) teaches using hollow fibers for optimizing pressure in fluid flow." However, the invention of Kumano et al. relates to a hollow fiber membrane module applicable for membrane separation treatments of fluids, such as, the desalination of seawater, desalination of brine, purification of wastewater, production of sterile water, production of ultrapure water or the like. Namely, the hollow fiber tubes were used as a membrane in Kumano et al., and thus it is different from the hollow fiber tube of the claimed invention in which the fluid flows only inside of the hollow fiber tube and the flow rate is controlled during the supplying process.

Furthermore, as described above, Baker does not teach the mixing ratio of claim 1 and Van Zon does not teach the material of the supply liquid circulation tube of claim 1.

Therefore, nowhere is the method of claims 1 and 6 disclosed or taught in the combination of cited references. It is respectfully requested that the rejection be reconsidered and withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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